

REMARKS/ARGUMENTS

This response follows a telephone interview between the Examiner and the undersigned on 17 February 2004, as memorialized in the Examiner's Interview Summary dated 19 February 2004.

The Office Action contained rejections of the claims under 35 USC §§112 and 102. The rejections will be responded to under the corresponding subheadings below.

a. Response to §112 Rejections

Claims 1-16 were rejected under 35 USC §112, second paragraph.

Claim 1 was rejected due to uncertainty, on grounds of the "may be" language and inconsistency in the "means" language of the elements. Claims 2-3 were rejected as vague by virtue of their dependency on claim 1.

As the Examiner noted, these same rejections had been raised earlier in the prosecution of the application, and had previously been corrected. However, the old language was inadvertently reinstated due to a clerical error in the preceding amendment. Accordingly, by the present amendment, Applicant has returned the claims to their previously amended form.

Claim 14, in turn, was rejected on grounds of vagueness due to inconsistency between the limitations "means for combining ... to produce high frequency pulse train", at lines 6-7, and "the means for generating a high frequency pulse train", at line 3. Claims 15-16 were rejected as vague by virtue of their dependency on claim 14.

Accordingly, Applicant has amended claim 14 at line 6 to replace the phrase "the circuit comprises" with "the means for generating the high frequency pulse train comprises", thereby clarifying that the limitation "means for combining...to produce high frequency pulse train" further defines the means for generating the pulse train.

For the reasons explained above, it is believed that the rejection under 35 USC §112 has been overcome.

b. Response to §102 Rejections

Claims 1-4, 12 and 13 were rejected under 35 USC §102(b) as being anticipated by Kuhnel et al. (U.S. 4,682,084). Applicant's arguments in the prior response were considered moot in view of the new grounds of rejection.

For the reasons discussed in the telephone interview of 17 February 2004, Applicant respectfully traverses the rejection of the claims under 35 USC §102(b), and requests that the rejection be reconsidered and withdrawn. Kuhnel fails to anticipate claim 1 because it does not teach every element of the claim (MPEP 2131). Specifically, Kuhnel does not show either (a) "means for producing independently of the first series of pulses a second high frequency series of pulses", or (b) "means for combining additively the first and second high frequency series of pulses to produce the high frequency pulse train", both of which are required by claim 1.

Regarding the first element, Kuhnel shows only one means for producing a high frequency signal, i.e., the oscillator 16 (col. 2, lines 67-68). In the Office Action it was asserted that element 28A in Kuhnel constituted the means for producing a first series of pulses, and that element 28B constituted the means for producing a second series of pulses independently from the first. Applicant respectfully disagrees: As was discussed, elements 28A and 28B are merely switches which do not in fact produce any series of pulses; instead, elements 28A and 28B simply switch the same series of pulses and send it alternately to the different primaries of the autotransformer 30. Consequently, since there is only one pulse series that is always dependent on the frequency of the single source, i.e., oscillator 16, there cannot be a second series of pulses produced independently from the first, as is required by claim 1.

Furthermore, Kuhnel shows no "means for combining additively" first and second high frequency series of pulses to produce a high frequency pulse train, as is also required by claim 1. In the Office Action it was asserted that element 30 of Kuhnel constitutes the means for combining the first and second series of pulses additively. However, element 30 is an autotransformer having primaries that are alternately energized by the switches 28A, 28B. As was discussed in the interview, the switches are gated on alternately (col. 3, lines 65-67), and moreover a dead time controller is provided to ensure that both switches are not be gated on at the same time, by providing a minimum dead time each cycle during which both switches must be gated off (col. 3, lines 30-35). Consequently, even assuming *arguendo* that first and second

independent series of pulses were provided to the transformer by the switches, it would be impossible for the series of pulses to be combined additively by the transformer because the pulses are never supplied to the two primaries simultaneously.

With regard to Applicant's FIG. 2, which was discussed during the interview, it will be understood that the third (bottom) wave form represents the pulse trains P0, P1 combined out-of-phase to provide a 0% output, as distinct from a series of pulses switched on an alternating, on-off basis in the manner of Kuhnel.

In summary, Kuhnel shows only a single pulse series that is alternately switched between the primaries of the autotransformer. Kuhnel does not show means for producing a first high frequency series of pulses and means for producing independently of the first series of pulses a second high frequency series of pulses, nor does it show means for combining additively first and second high frequency series of pulses to produce a high frequency pulse train, as is expressly required by Applicant's claim 1. Kuhnel consequently fails to anticipate claim 1, and Applicant therefore respectfully requests that the rejection of claim 1 and its dependent claims under 35 USC §102(b) be reconsidered and withdrawn.

c. Allowable Subject Matter

Claims 5-11 were stated to be allowable if rewritten to overcome the rejection under 35 USC §112 and to include all of the limitations of the base claim and intervening claims. However, for the reasons discussed above, it is respectfully submitted that claim 1 and therefore its dependent claims 5-11 are allowable over the prior art.

It was further stated that claims 14-16 would be allowable if amended to overcome the rejection under 35 USC §112. As discussed above, independent claim 14 has been amended to overcome the §112 rejection. It is therefore believed that claims 14-16 are now in condition for allowance.

d. Conclusion

Applicant respectfully requests reconsideration of the present application in view of the amendments and remarks set forth herein. It is believed that the above-referenced claims are now in condition for allowance.

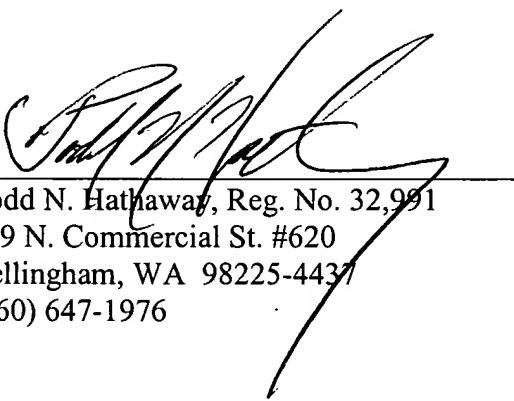
Applicant appreciates the courtesy extended by the Examiner in considering the draft response and evaluating the issues in the telephone conference. If there is any matter that can be expedited by additional consultation with Applicant's attorney, such would be welcome. Applicant's attorney can normally be reached at the telephone number given below.

Signed at Bellingham, County of Whatcom, State of Washington this 24th day of February 2004.

Respectfully submitted,

DAVID JOHN AARONS

By


Todd N. Hathaway, Reg. No. 32,991
119 N. Commercial St. #620
Bellingham, WA 98225-4431
(360) 647-1976